

# Forecasting Evaluation of WindSat in the Coastal Environment

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WindSat has demonstrated that measurements from polarimetric space-based microwave radiometers can be used to retrieve global ocean surface vector winds. Since the date of launch in 2003, substantial incremental improvements have been made to WindSat data processing, calibration, and retrieval algorithms. The retrievals now have higher resolution, improved wind vector ambiguity removal, and enhanced capability to represent high winds.

Utilization of WindSat retrievals (wind vectors, total precipitable water, rainrate and sea surface temperature) will be demonstrated in the context of operational weather forecasting applications, especially the monitoring of topographically-forced winds. Examples will be presented from various parts of the world, including inland seas, midlatitude oceans, the tropics, and the United States. We will illustrate retrievals in extreme high- and extreme low-wind regimes, both of which can be problematic. Rain contamination will be addressed. We will include a comparison of WindSat vector maps to corresponding maps from the QuikScat scatterometer. We will discuss how near-realtime data from WindSat is being transitioned to specific offices within the National Weather Service.